

ABSTRACT OF THE DISCLOSURE

Diene rubber compositions are described containing a diene elastomer, a reinforcing inorganic filler, and a coupling agent wherein the inorganic filler includes a silica having the following characteristics:

- (a) a BET specific surface area between 45 and 400 m²/g;
- (b) a CTAB specific surface area between 40 and 380 m²/g;
- (c) an average particle size (by mass), $d_{w,}$, of 20 to 300 nm;

and at least one of the following characteristics, preferably two and more preferably all three:

- (d) a particle size distribution such that
 $dw \geq /CTAB) - 30$;
- (e) a porosity which meets the criterion $L / FI \geq -0.0025 CTAB + 0.85$;
- (f) an amount of silanols per unit of surface area, N_{SiOH/nm^2} ;
 $N_{SiOH/nm^2} \leq -0.027 CTAB + 10.5$.

These diene rubber compositions can be used for the manufacture of tires or of semi-finished products intended for tires.